

# Emissions Inventory Overview

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Mecklenburg County Land Use and Environmental Services Agency

MECKLENBURG COUNTY

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# Why Report Emissions

The Clean Air Act and its Amendments require ongoing demonstration of the effectiveness of AQ programs and rules in achieving continuous improvement:

- National Level:
  - National Emissions Inventory (NEI): MCAQ reports emissions data annually
  - Toxics Release Inventory (TRI): emissions reported directly by facility to EPA
  - National Air Toxics Assessment (NATA): MCAQ's Triannual Toxics Inventory, most recently in 2017, next in 2020
- State Level:
  - State Implementation Plans (SIPs)

# How We Use Emissions Data: Permitting

Facility Classification - based on the facility Potential-to-Emit:

- Criteria Pollutants:
  - Particulate Matter (PM<sub>10</sub>)
  - Carbon Monoxide (CO)
  - Nitrogen Oxides (NO<sub>x</sub>)
  - Sulfur Dioxide (SO<sub>2</sub>)
  - Volatile Organic Compounds (VOC)
- Hazardous Air Pollutants (HAPs)
  - ≥ 10 tpy a single HAP
  - ≥ 25 tpy combined HAP

# How We Use Emissions Data: Permitting

- Facility Classifications:

Potential-to-Emit (tons/year)	Facility Classification
≥5 - <25 tpy of any Criteria Pollutant	C
≥25 - <100 tpy of PM10, CO, or SO <sub>2</sub>	B
≥25 - <100 tpy of NOx or VOC	Select B (SB)
≥ 100 tpy of any Criteria Pollutant or ≥ 10/25 tpy HAP, facility accepted a federally enforceable limit	Synthetic Minor (SM)
≥ 100 tpy of any Criteria Pollutant or 10/25 tpy HAP	Title V (TV)

- Permit Application Fee depends on facility classification

# How We Use Emissions Data: Permitting

- Determines/Impacts Rule Applicability:
  - Title V Permitting Requirements
  - Prevention of Significant Deterioration (PSD) and Non-Attainment New Source Review (NNSR) Permitting Requirements
  - New Source Performance Standards (NSPS)
  - Federal HAP Standards
    - Maximum Achievable Control Technology Standards (MACT)
    - Generally Available Control Technology Standards (GACT)
  - State Toxic Air Pollutant (TAP) Permitting Requirements
  - Reasonably Available Control Technology Standards (RACT): VOC and/or NO<sub>x</sub>

# How We Use Emissions Data: Permitting

- PSD Permitting Modeling Requirements:
  - A facility subject to PSD must demonstrate its emissions, **in conjunction with emissions from other sources**, will not cause or contribute to a violation of the applicable National Ambient Air Quality Standard (NAAQS) or PSD Increment
  - MCAQ modeling for PSD permits
  - State (both NC and SC) requests for emissions data

# How We Use Emissions Data: Compliance

- Determine Compliance With Emission/Permit Limits
  - Synthetic Minor Limit
  - PSD and NNSR Limits
  - Modelled State Toxic Air Pollutant (TAP) Limits
  - Other Rule-Based Limits
    - MACT/GACT Standards
    - NSPS Standards
    - RACT Standards: VOC and/or NO<sub>x</sub>

# How We Use Emissions Data: Annual Facility Fee

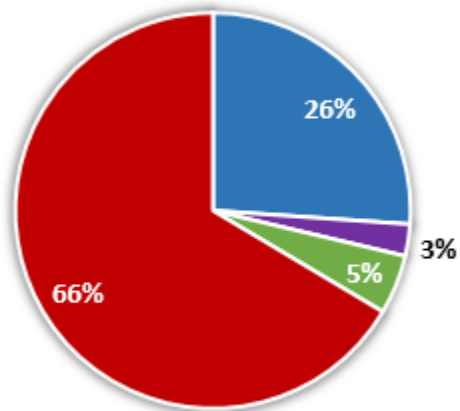
- The Annual Administration and Monitoring Facility Fee has two parts:
  - Fixed Fee based on facility classification
  - Variable Fee based on facility actual annual emissions (tons/year):
    - \$/ton of reported actual emissions of PM10, NOx, SO<sub>2</sub>, and VOC
    - Federal “Presumptive Fee” for fiscal year 2019: \$51.06/ton
      - Fee is adjusted by EPA each year for inflation
    - MCAQ emission fee for fiscal years 2019 and 2020: \$50/ton



# Mecklenburg County Emissions Inventory By Source Type

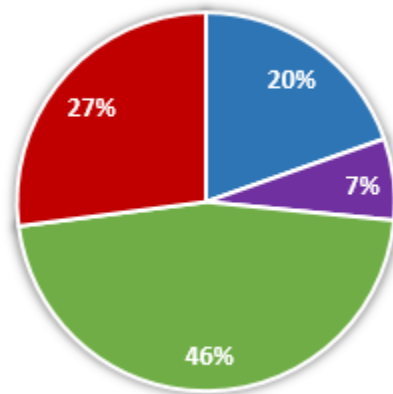
■ Onroad Mobile   ■ Nonroad Mobile   ■ Point Sources   ■ Area Sources

Nitrogen Oxide (NO<sub>x</sub>) Sources



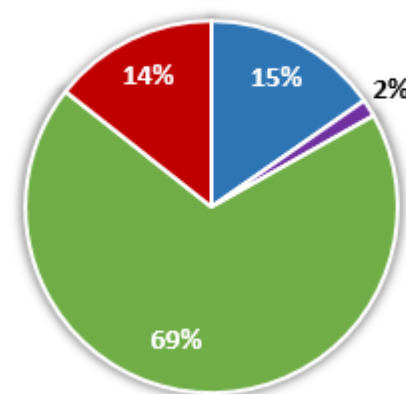
Total = 15,257 tons

Volatile Organic Compounds (VOC) Sources



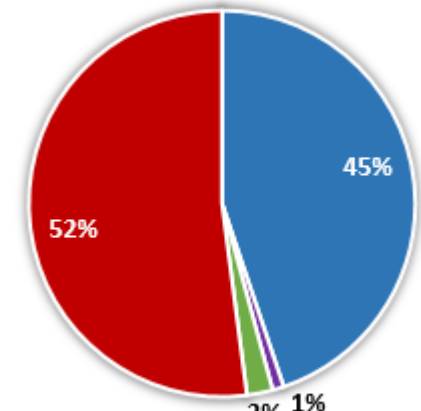
Total = 16,968 tons

Fine Particulate Matter (PM<sub>2.5</sub>) Sources



Total = 2,727 tons

Carbon Monoxide (CO) Sources



Total = 111,261 tons

# Questions?

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